

REMARKS

I. Introductory Remarks, Status of the Application and Response to Objections

Claims 14-26 are all the claims pending in the application. Claims 15-21 are presently withdrawn from consideration. The remaining pending claims 14 and 22-26 have received substantive examination.

In the Office Action dated June 16, 2009, the Examiner has confirmed the Applicant's election of Group VI, corresponding to claims 22-26, and has confirmed review and consideration of the Information Disclosure Statements filed on November 9, 2006, and April 22, 2008. In addition, the Examiner has acknowledged Applicant's priority claim. Applicant thanks the Examiner for these actions.

By the present Amendment, Applicant is canceling claims 25 and 26. This renders the objection to the drawings moot. Accordingly, Applicant requests the Examiner to withdraw the drawing objection.

Applicant further requests the Examiner to withdraw the objection to the specification in light of the amendments to the opening paragraph set forth above, which restore the substantive content of the disclosure to its state when the application was originally filed. Also, the amendments to the Abstract respond to the Examiner's concerns in self-explanatory fashion.

The Examiner has objected to claims 14 and 22-26 based on a number of separate informalities, mostly involving antecedent basis issues.

The Examiner has rejected claims 14 and 22-26 under 35 U.S.C. § 112, second paragraph. Additionally, claims 14 and 22-26 are rejected under 35 U.S.C. § 102(b) as being

anticipated by US 6,252,712, to Fürter et al. (“Fürter”), and claims 14 and 22 are rejected under 35 U.S.C. § 102(b) as being anticipated by US 4,643,534 to Chun et al. (“Chun”). No other grounds of rejection or objection are presented. The present Amendment addresses each point of rejection and objection raised by the Examiner. Favorable reconsideration is respectfully requested.

II. Claim Rejections

A. In response, first, to the grounds of rejection of claims 14 and 22-26 under 35 U.S.C. § 112, second paragraph, Applicant provides the following response. The cancellation of claims 25 and 26 has rendered the rejection moot for these particular two claims. With respect to the remaining rejected claims 14 and 22-24, the wording “at least one of the first and second surfaces” in claim 14 indeed means that at least one out of four surfaces (two first surfaces and two second surfaces) is reprocessed. While Applicant considers the original wording of claim 14 to have been sufficiently clear and definite, in particular when read in light of the specification, Applicant is nonetheless amending claim 1 as an accommodation, in order to present the actual meaning in absolutely unequivocal terms.

The Examiner asserts that “two surfaces and not one surface must be reprocessed for the creation of a local thickness variations”. However, this is not correct. Although the exemplary embodiments of Figures 3 and 4 show indeed two reprocessed surfaces, this is not mandatory for the claimed invention. Paragraph 10 of the published application (US 2007/0183017 A1) clearly expresses that the thickness may vary locally “on one or more” correcting elements.

Furthermore, paragraph 12 states that the configuration shown in Figures 3 and 4 with two complementary reprocessed surfaces is only “a preferred configuration”.

B. The Remarks turn now to the rejection of claims 14 and 22-26 based on Fürter.

Again, the rejection of claims 25 and 26 is moot in view of the cancellation of these two claims.

Fürter relates to an optical system with a polarization compensator (see, e.g., title). As illustrated in Fig. 1 of the reference:

[B]irefringent optical elements 21a, 21b (at least one) are provided in the beam path 10 [sic: 12] behind the lens groups 11, 12 [sic: 11, 10], are irregular in thickness over the cross section, and at least partially compensate the local disturbances of the linear polarization in the beam path 10 [sic: 12]. . . . Plates 23a, 23b of isotropic material (quartz glass) have optically negative shapes to the correction plates 21a, 21b. The optical path over the whole cross section of the light beam 10 [sic: 12] is thereby again equal, so that the wavefront is not disturbed by the combination of the elements 21a, 21b and plates 23a, 23b. Fürter at col. 2, lines 51-55 and col. 2, line 66, to col. 3, line 4.

The Fürter reference is discussed and distinguished in Applicant’s specification at paragraphs [0005]-[0007]. As noted there:

A disadvantage with [the Fürter] correcting device . . . is that the correcting plates do not only influence the polarization where perturbations are to be compensated for, but change the polarization over the entire cross section of the light beam. This is because the correcting plates cannot comprise birefringent material exclusively where compensation for polarization distribution perturbations is required. In that case, the correcting plates would need to be only a few micrometers thick and also have holes at the positions where no perturbations are to be compensated for. Such correcting plates would be neither producible nor manageable. The correcting plates must therefore comprise additional material, which acts as a kind of support but also contributes to the influence on the polarization over its entire cross section.

Applicant’s published application at ¶ [0007].

In other words, in contrast to Fürter, the present inventors have developed a device in which the polarization of light passing through is influenced in controlled manner only where perturbations of the polarization distribution need to be compensated for. Applicant's published application at ¶ [0008] (emphasis added). As such, a plurality of birefringent elements mutually cancel out their birefringent effects. Applicant's published application at ¶ [0010]. This avoids the need to add an element that compensates the contribution of the correcting element in those areas where it does not correct a perturbation of the polarization distribution.

Therefore, as illustrated by way of example in each of the embodiments of Figs. 2, 5 and 6, and as recited in claim 14 itself: "the arrangement, the first and the second thicknesses and birefringence properties of the first and the second correcting elements are selected so that birefringent effects within the correcting member cancel each other out at least approximately, when the local thickness variations Δd are neglected."

As such, claim 14, as well as all claims dependent thereon, are patentable over Fürter in view at least of this final limitation expressly recited in the claim. Accordingly, the Examiner is requested to reconsider the grounds of rejection and withdraw the rejection accordingly.

C. With reference to Figs. 1A-1D, Chun discloses:

optical transmission filters [that] are two or three piece optical components designed for use with beams of polarized coherent light centered on the axis of the filters. The filters each include a pair of mating lenses of doubly refracting material whose crystal optic axes are mutually orthogonal and whose mating surfaces are either spherical (convex - concave respectively) or cylindrical (convex - concave respectively).

Chun at col. 4, lines 18-26.

Independent claim 14, however, requires that both the first and the second “birefringent correcting element [have] two substantially parallel and substantially planar surfaces.” In distinct contrast, the disclosure of Chun expressly and consistently requires the mating surfaces of the optical transmission filters to be specifically either spherical or cylindrical. As such, Chun fails to disclose, or even suggest, the arrangement as claimed.

III. Concluding Remarks

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/ George F. Lehnigk /

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER

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George F. Lehnigk
Registration No. 36,359